

## REMARKS

Upon entry of the present amendment, claims 1, 26-29, and 31-33 are pending in the instant application. Claims 1, 27-29 and 31-33 have been amended. Support for the claim amendments presented herein is found throughout the specification and in the claims as originally filed. For example, support for the amendment to claim 1 is found at least in the paragraph bridging pages 45-46; on page 49; in the paragraph bridging pages 69-70 and in Figure 1A of the as-filed application. Accordingly, no new matter has been added the amendments presented herein.

### **Claim Rejections Under 35 U.S.C. §112, First Paragraph**

Claims 1 and 25-33 have been rejected under 35 U.S.C. §112, first paragraph as lacking written description. According to the Examiner, “the written description is not commensurate in scope with any compound which is selected from the group consisting of any fusion protein, any polypeptide, any peptidomimetic, any antisense polynucleotide, any prodrug, and antibody, any small molecule inhibitor or any ribozyme.”

Applicants traverse this rejection. The amended claims recite methods of inhibiting osteoclast-mediated bone resorption by administering a compound that inhibits the activity of a gene product encoded by osteoclast associated gene OC14, wherein the osteoclast-associated gene OC14 comprises the nucleotide sequence of SEQ ID NO: 50, wherein the activity of a gene product encoded by OC14 is inhibited by administering a compound that inhibits the expression of the gene product, and wherein the activity of the gene product is decreased by at least 10% in the presence of the compound, as compared to the activity of the gene product in the absence of the compound. The compound is, for example, a fusion protein, a polypeptide, a peptidomimetic, an antisense polynucleotide, a prodrug, an antibody, a small molecule inhibitor, or a ribozyme as recited by dependent claim 26.

By design, the invention described by independent claim 1 is not limited to a specific compound. The broadest scope of the invention claimed here is a method of inhibiting osteoclast-mediated bone resorption by inhibiting the expression of a gene product encoded by a specific osteoclast-related protein, *i.e.*, OC14, which comprises the nucleotide sequence of SEQ ID NO:50. This is a broadly applicable invention that is not limited by the means for achieving

the desired level of inhibition, *i.e.* it is not limited by the particular type of compound that is used to produce the desired decrease in expression of the OC14 gene product.

The claimed methods for inhibiting osteoclast-mediated bone resorption are described throughout the as-filed specification, *e.g.*, at pages 1-2 and at page 49. In particular, the specification teaches the relevant, identifying characteristics of such methods: the target to be inhibited, *i.e.*, OC14; the desired minimum level of inhibition, *i.e.*, a decrease in activity of at least 10%; and a representative number of compounds that can interact with this target to produce the desired outcome. Thus, the claimed methods are literally supported by the as-filed specification. Accordingly, Applicants submit that the subject matter recited by the amended claims is described in such a way as to reasonably convey to one skilled in the relevant art that the inventors had possession of the claimed invention at the time the instant application was filed. Withdrawal of this rejection is, therefore, requested.

## CONCLUSION

On the basis of the foregoing amendment and remarks, Applicants respectfully submit, that the pending claims are in condition for allowance. If there are any questions regarding this amendment and/or these remarks, the Examiner is encouraged to contact the undersigned at the telephone number provided below.

Respectfully submitted,

  
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